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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,394	09/13/2000	Yasuhiro Komori	862.C2001	8092

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

CHAWAN, VIJAY B

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,394

Applicant(s)

KOMORI ET AL.

Examiner

Vijay B. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/16/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25, 26, 28, 30, 32, 34, 35, 37 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25-26, 28, 30, 32, 34-35, 37, and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 6, 8, 21, 25, 26, 30, 34, 35 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (5,749,068).

As per claim 1, Suzuki teaches a speech input terminal in a speech communication system comprising said speech input terminal for transmitting inputted speech data to a speech recognition apparatus through a network, and said speech recognition apparatus executing speech recognition processing for the speech data transmitted from said speech input terminal, said speech input terminal comprising:

speech receiving means for receiving speech data from speech input means (Col.1, lines 34-36, Fig.1, item 200);

creating means for creating a model based on information representing an operation environment, the model being for environment adaptation for speech recognition in said speech recognition apparatus (Fig.23, items 1-9, Fig.1, Col.1, lines 35-47); and,

communication means for transmitting the model and the speech data to said speech recognition apparatus and for receiving the results of the speech recognition executed on the basis of the model by said speech recognition apparatus (Col.8, lines 41-45, Fig.13, items 14-17, Fig.13, item 18).

As per claim 2, Suzuki teaches the terminal according to claim 1, wherein the model indicates at least one of a characteristic of said speech input means, a noise characteristic, and a speaker characteristic (Fig.3, Col.8, lines 23 - 32).

As per claim 4, Suzuki teaches the terminal according to claim 1, further comprising means for storing the model, means for determining whether there has been a change in the model in each transmitting of the speech data, and, means for notifying said speech recognition apparatus of the corresponding model, when there has been no change in the model (Col.3, lines 28-32, 57).

As per claim 6, Suzuki teaches a speech recognition apparatus in a speech communication system comprising a speech input terminal for transmitting inputted speech data to said speech recognition apparatus through a network, and said speech recognition apparatus executing speech recognition processing for the speech data transmitted from said speech input terminal, said speech recognition apparatus comprising:

speech recognition means for executing speech recognition processing for the speech data transmitted from said speech input terminal through the network(Col.1, lines 34-36, Fig.1, item 200); and,

means for receiving a model for environment adaptation for speech recognition from said speech input terminal, the model being created by said speech input terminal based on information representing an operation environment thereof, wherein said speech recognition means executes speech recognition processing on the basis of the model (Fig.23, items 1-9, Fig.1, Col.1, lines 35-47, Col.8, lines 41-45, Fig.13, items 14-17, Fig.13, item 18).

As per claim 8, Suzuki teaches the apparatus of claim 6, further comprising means for creating an environment adaptation speech recognition model on the basis of the received model (creation of a noise model, Col.8, lines 5-16).

As per claim 39, Suzuki teaches the apparatus of claim 1, wherein the model is an average or variance of the captured information (Fig.24, item 10).

As per claim 21, Suzuki teaches a speech communication system comprising a speech input terminal for transmitting inputted speech data to a speech recognition apparatus through a network, and said speech recognition apparatus executing speech recognition processing for the speech data transmitted from said speech terminal input terminal, wherein said speech input terminal comprises speech receiving means for receiving speech data from speech input means creating means for creating a model based on information representing an operation environment, the model being for environment adaptation for speech recognition in said speech recognition apparatus, and communication means for transmitting the model and the speech data to said speech recognition apparatus and for receiving the results of the speech recognition executed on the basis of the model by said speech recognition apparatus, wherein said

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speech recognition apparatus comprises means for executing speech recognition processing on the basis of the model (Col.1, lines 34-36, Fig.1, item 200, Fig.23, items 1-9, Fig.1, Col.1, lines 35-47, Col.8, lines 41-45, Fig.13, items 14-17, Fig.13, item 18).

As per claim 25, Suzuki teaches a control method in a speech communication system comprising a speech input terminal transmitting inputted speech data to a speech recognition apparatus through a network, and the speech recognition apparatus executing speech recognition processing for the speech data transmitted from the speech input terminal, said method comprising: a speech receiving step of receiving speech data from speech input means (Col.1, lines 34-36, Fig.1, item 200); a creating step of creating a model in the speech input terminal based on information representing an operation environment, the model being for environment adaptation for speech recognition in the speech recognition apparatus (Fig.23, items 1-9, Fig.1, Col.1, lines 35-47); and a communication step of transmitting the model and the speech data from the speech input terminal to the speech recognition apparatus and of receiving the results of the speech recognition executed on the basis of the model by the speech recognition apparatus (Fig.23, items 1-9, Fig.1, Col.1, lines 35-47, Col.8, lines 41-45, Fig.13, items 14-17, Fig.13, item 18).

As per claim 26, Suzuki teaches a control method in a speech communication system comprising a speech input terminal transmitting inputted speech data to a speech recognition apparatus through a network, and the speech recognition apparatus executing speech recognition processing for the speech data transmitted from the speech input terminal said method comprising a step of receiving a model for

environment adaptation for speech recognition from the speech input terminal, the model being created by the speech input terminal based on information representing an operation environment thereof, and a step of executing in the speech recognition apparatus, speech recognition processing on the basis of the model (Col.1, lines 34-36, Fig.1, item 200, Fig.23, items 1-9, Fig.1, Col.1, lines 35-47, Col.8, lines 41-45, Fig.13, items 14-17, Fig.13, item 18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 10, 23, 28, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,749,068) in view of Satoh et al., (5,293,588).

Suzuki teaches the terminal according to claim 1 and 8. However, Suzuki does not specifically teach the terminal further comprising means for quantizing the speech data using a quantization table before transmitting the speech data to said speech recognition apparatus, the quantization table being received from said speech recognition means, and wherein said speech input terminal quantizes the speech data using a quantization table before transmitting the speech data to said speech

recognition apparatus, and, wherein said apparatus further comprises means for creating the quantization table based on the environment adaptation speech recognition model, and, means for transmitting the quantization table to said speech input terminal as per claims 3, 10, 23, 28, 32 and 37. Satoh et al., do teach the claimed input terminal further comprising means for quantizing the speech data using a quantization table before transmitting the speech data to said speech recognition apparatus, the quantization table being received from said speech recognition means (Col.2, line 67 – Col.3, line 9), and wherein said speech input terminal quantizes the speech data using a quantization table before transmitting the speech data to said speech recognition apparatus, and, wherein said apparatus further comprises means for creating the quantization table based on the environment adaptation speech recognition model, and, means for transmitting the quantization table to said speech input terminal (Col.9, lines 3-8, 55-58).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the apparatus/method as taught by Satoh et al., in the apparatus/method of Suzuki, because an artisan with ordinary skill in the art at the time of invention would readily realize that this would allow a mobile speech processing apparatus to be used in a variety of environments without undue adjustments.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,749,068) in view of Satoh et al., (5,293,588) as applied to claim 10 above, and further in view of Nomura et al., (4,907,274).

Suzuki in view of Satoh teach the apparatus according to claim 10. However, the combination of Suzuki in view of Satoh et al., do not specifically teach the apparatus of 10 wherein the quantization table is created based on the distribution of the environment adaptation speech recognition model as per claim 12. Nomura et al., do teach the quantization table is created based on the distribution of the environment adaptation speech recognition model. (Col.14, lines 1-6).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the teaching of Nomura et al., in the apparatus of Suzuki in view of Satoh et al., because an artisan with ordinary skill in the art would realize that this would provide a standard pattern for composite similarity calculation based on appropriate value and vector.

6. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,749,068) in view of Tchorzewski (4,922,538).

Suzuki teaches the apparatus according to claims 6 and 8. However Suzuki does not specifically teach the apparatus, wherein said speech communication system comprises a plurality of speech input terminals and said apparatus further comprises means for storing the model in correspondence with each of said speech input terminals as per claims 14 and 18. Tchorzewski, does teach the apparatus, wherein said speech communication system comprises a plurality of speech input terminals and said apparatus further comprises means for storing the model in correspondence with each of said speech input terminals (Fig.1, item 2, Col.2, lines 1-13, where the multi-user

speech recognition system has data base storing templates for transfer to recognizers assigned to specific terminals).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the teaching of Tchorzewski et al., in the device of Suzuki, because, this would effectively avoid setting up the terminal to compensate for every variation in operation.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,749,068) in view of Satoh et al., (5,293,588). as applied to claim 10 above, and further in view of Tchorzewski (4,922,538).

Suzuki in view of Satoh et al., teaches the apparatus according to claim 10. However Suzuki in view of Satoh et al., does not specifically teach the apparatus, wherein said speech communication system comprises a plurality of speech input terminals and said apparatus further comprises means for storing the model in correspondence with each of said speech input terminals as per claim 19. Tchorzewski, does teach the apparatus, wherein said speech communication system comprises a plurality of speech input terminals and said apparatus further comprises means for storing the model in correspondence with each of said speech input terminals (Fig.1, item 2, Col.2, lines 1-13, where the multi-user speech recognition system has data base storing templates for transfer to recognizers assigned to specific terminals).

Therefore, it would have been obvious to one with ordinary skill in the at the time of invention to incorporate the teaching of Tchorzewski in the device of Suzuki in view of

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Satoh et al., because, this would effectively avoid setting up the terminal to compensate for every variation in operation.

Claims 30, 32, 34, 35, 37 are directed toward a method and storage medium containing instructions to implement the method of claim 28, are similar in scope and content of the method claims above, and are rejected under similar rationale.

Response to Arguments


8. Applicant's arguments with respect to claims 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25-26, 28, 30, 32, 34-35, 37, and 39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Thursday 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vijay B. Chawan
Primary Examiner
Art Unit 2654

vbc
5/31/05

**VIJAY CHAWAN
PRIMARY EXAMINER**